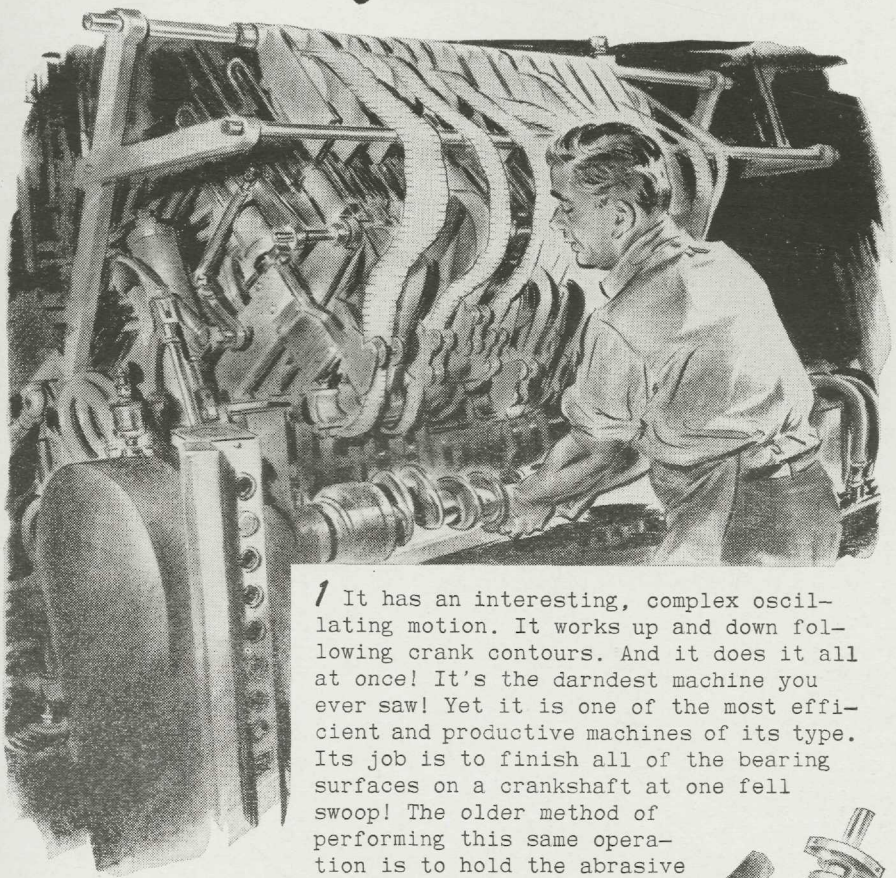
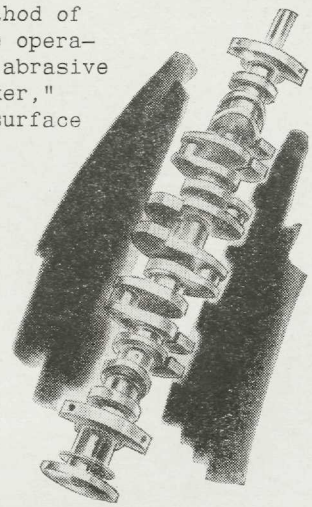
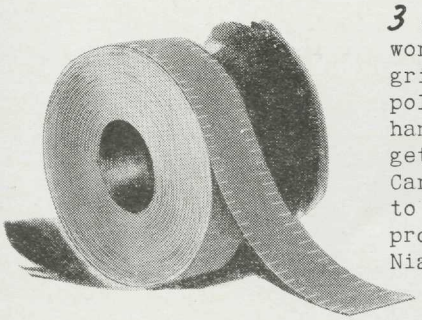
The darndest machine you ever saw...



1 It has an interesting, complex oscillating motion. It works up and down following crank contours. And it does it all at once! It's the darndest machine you ever saw! Yet it is one of the most efficient and productive machines of its type. Its job is to finish all of the bearing surfaces on a crankshaft at one fell swoop! The older method of performing this same operation is to hold the abrasive cloth in a "nutcracker," finishing only one surface at a time.



2 With the new machine, strips of successively finer grits of abrasive cloth, having serrated edges to permit the strips to follow the fillets of the bearings, are automatically inched past the revolving crankshaft from a feed roll of the cloth. And on many a job it's Aloxite Brand cloth by Carborundum that gives the ultimate smooth, satin finish.



3 Carborundum Research is steadily working to improve production through grinding, finishing, sharpening and polishing. It will continue to work hand in hand with industry. When you get into the field, remember that Carborundum Engineers will stand ready to help with your production problems. The Carborundum Co., Niagara Falls, New York.

CARBORUNDUM
TRADE MARK
ABRASIVE PRODUCTS

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Campus News

RESEARCH AND ENGINEERING KEEP GENERAL ELECTRIC YEARS AHEAD

AUTOMATIC PILOT

FLYING blind most of the time, a pilot has a hard job keeping his plane on its course. An automatic pilot, electrically-driven, allows him to relax occasionally . . . to save his physical and mental resources for the job that may, and often does, lie far ahead.

An electric motor spins 12,000 revolutions per minute to keep the gyroscopic mechanism, guiding power of the automatic pilot, rotating at constant speed. The unit is tightly sealed to insure constant speed of rotation even when the air outside contains many dust particles, or its temperature is very low.

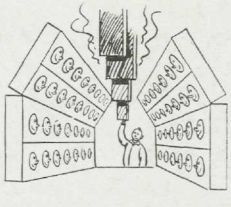
The automatic pilot is able to take over the controls and hold the plane on a predetermined course. Any pitch, roll, or yaw—that is, lengthwise or crosswise tilt or turn of the plane—produces an electric signal in the G-E automatic pilot. This signal is amplified and converted into hydraulic power which moves elevators, ailerons, and the rudder to bring the plane back to its correct position.

FLYING SUITS

WHEN planes land in unpopulated regions, or when fliers have to bail out in the middle of nowhere, there is comfort to a General Electric flying suit. Even when not plugged in, the suits can take rugged terrain, strenuous action, and cold weather.

A short time ago some G-E engineers spent two days and nights in the suits on Mt. Cranmore and Mt. Washington in New Hampshire. They skied, hiked, blazed trails, and camped out in heavy snowdrifts at temperatures close to zero.

After the ordeal, men and suits were doing nicely. The men had kept warm; the suits had withstood the wear; and the electric circuits built into the clothing operated perfectly when they were plugged in.



SPEED DRYING

DRYING time has been cut from six hours to 27 minutes on airplane instrument cases by using the new General Electric infrared Drying Lamps. These lamps are one of the important "little things" that G.E. is manufacturing to speed things up on the production front.

These lamps are being used in many war industries to dry everything from paint on tanks and jeeps to photographic film and the glue on envelope flaps. In addition, some are designed for roving jobs such as drying out important equipment after it has been drenched by floods. Equipment speedily dried is frequently salvaged with little loss. *General Electric Company, Schenectady, New York.*

Hear the General Electric radio programs: "The G-E All-girl Orchestra" Sunday 10 p.m. EWT, NBC—"The World Today" news, every weekday 6:45 p.m. EWT, CBS.

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